SONY
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PVM-741

Professional Video Monitor

Carry the PVM OLED Quality Imaging with You, Anytime, Anywhere

The PVM-741 is a high-performance, 7.4-inch* OLED (organic light-emitting diode) monitor backed by TRIMASTER EL™ technology.

By combining OLED display panel technology along with a 10-bit panel driver and Sony's signal processing technology, the PVM-741 monitor achieves amazing picture quality – exceptional black performance, a wide color gamut, and quick pixel response with virtually no motion blur.

In addition to high quality picture performance, the PVM-741 monitor offers mobility and an advanced feature-set in a small size monitor.

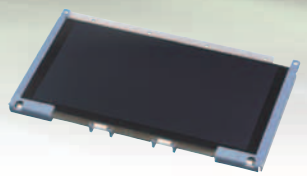
The PVM-741 is ideal for a wide range of professional monitoring applications, including studio camera monitoring, outside broadcast, onset acquisition for digital cinema, field production, editing studio, and even research and development.

* 188-mm, viewable area, measured diagonally.
Simulated images

TRIMASTER EL

PVM-741 – The TRIMASTER EL 7.4-inch Monitor Continues Evolving with Smart Features in a Compact Body

The PVM-741 is an all-in-one TRIMASTER EL Series OLED picture monitor, delivering exceptional picture quality with superb performance features and convenient functions, all contained in a compact, functional design.



TRIMASTER EL OLED panel

Unrivalled Picture Quality

Sony's OLED with a 10-bit RGB Drive

The PVM-741 Quarter HD resolution (960 x 540 pixels) and a 10-bit RGB driver, together with Sony's Super Top Emission OLED display panel, creates lifelike and smoother-than-ever gradation from dark to bright portions of a scene such as in a sunrise or sunset.

8-bit (256-levels) image*

10-bit (1024-levels) image*

* Simulated images

Superb Black Performance

Thanks to Sony's OLED system, deep blacks can be accurately displayed and the black portion of an image is not degraded.

* Simulated images

Quick Response with Blur-free Motion

Because the OLED electroluminescent layer inherently responds to any electrical current input, it emits light immediately. By this mechanism, excellent quick response characteristics can be achieved in fast-motion images.

* Simulated images

Mobility and Flexibility

Robust Lightweight Compact Design

It incorporates a lightweight, compact aluminum body, which offers flexibility and can be adapted according to a variety of applications. The various range of accessory items further increases user flexibility and convenience. For example, the retractable handle allows users to carry this OLED monitor anytime, anywhere, and the supplied arm-mount bracket makes it easy to mount this monitor into a camera system.

PVM-741 with carrying handle

Arm-mount bracket is attached on the top

Evolving Features and Functions

Two 3G/HD/SD-SDI Input Capability

The PVM-741 is equipped with standard interfaces including 3G/HD/SD-SDI (x2) inputs, composite (x1), and HDMI® (x1).

Waveform Monitor and Vector Scope Display

The combination of the vector scope and waveform monitor functions allows a simple measurement without additional measurement equipment.

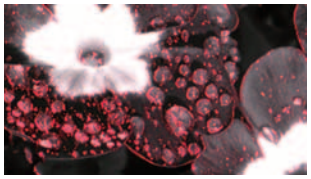
Waveform monitor

Vector scope

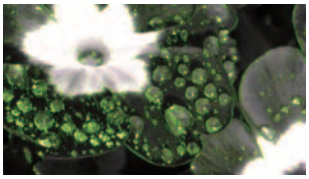
* Simulated images

Camera Focus Functions

The camera focus function works in various colors to ease camera focus alignment.



Focus in red



Focus in green

* Simulated images

Accurate Color Reproduction and Consistency

As Sony's Super Top Emission OLED display panel itself reproduces high-purity colors and in combination with the 10-bit panel driver and Sony's signal processing technology, the PVM-741 monitor achieves broadcast standards (ITU-R BT.709, SMPTE-C, and EBU).

Every PVM-741 monitor is precisely color-calibrated at the factory. In addition, the PVM-741 monitor is also equipped with Sony's unique feedback circuit system. This system works to constantly monitor emitted light, to feed back monitor results, and to adjust white balance. This ensures color and gamma consistency, and reduces user maintenance tasks.

Robust, Light-weight, and Compact Body

Flexible Styling

Incorporating a light-weight and compact aluminum diecast body with a detachable AR-coated protection panel, this model is flexible enough to change configuration according to user requirements: with or without a stand (which is easily detachable), tilted on a stand (15-degree slant), rackmounted, or set on a camera pedestal.

PVM-741 without stand

PVM-741 with standard stand

PVM-741 with standard stand tilt (15°)

Retractable Carrying Handle

The PVM-741 provides a retractable carrying handle as a supplied accessory. With this carrying handle, users find it easy to carry this superb OLED performance anytime, anywhere.

PVM-741 with carrying handle

Carrying handle is retracted

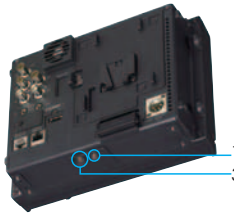
Mounting Flexibility

The PVM-741 is 3.8U high and half-rack wide. Using the optional MB-531 mounting bracket with a 10-degree-forward and 10-degree-backward nonstop-tilt capability, two units can be installed side by side in a 19-inch EIA standard rack.

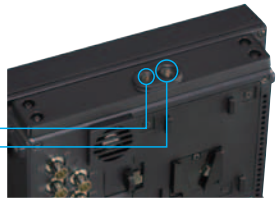
PVM-741 installed in the optional MB-531 19" mounting bracket with MB-532 mounting panel

Easy Mounting into A Camera System

With 3/8-inch and 1/4-inch screw holes on its base, the PVM-741 can be installed in a camera system. Also, with the supplied arm-mount bracket fixed on the top, the PVM-741 can be installed in a camera arm.



PVM-741 rear and bottom



Arm-mount bracket is attached on the top

ENG Kit VF-510

For use in ENG and EFP field, the optional VF-510 ENG Kit provides a viewing hood, carrying handle, and connector protector.

PVM-741 with VF-510 ENG Kit

Detachable AR (anti-reflection) -coated Protection Panel

AR-coated protection panel keeps the OLED panel surface from scratching and keeps reflection from ambient light to a minimum.

Detachable AR-coated protection panel

AC/DC Operations

The PVM-741 can be operated with two-way power supplies: DC 12 V and AC via the attached dedicated AC adaptor.

PVM-741 rear view with AC adaptor

Operational Convenience

Camera Focus Function

The PVM-741 can control the aperture level of a video signal, and display images on the screen with sharpened edges to help camera focus operation. Further to this, the sharpened edges can be displayed in user-selectable colors (white, red, green, blue, and yellow) for more precise focusing. This camera focus function can even be enhanced when combined with native scan mode.

* Simulated images

Aspect and Scan Selection

The aspect ratio can be switched according to the input signal between 16:9 and 4:3. Scan size can be selected from normal scan (0%), over scan (5%), or native scan (dot-by-dot). In native scan mode, the number of input signal pixels exceeding the number of display pixels is displayed partially on the screen. To check the entire picture, the display area can be shifted with the rotary encoder on the monitor control panel.

Shifting the display area in native scan (dot-by-dot)

* Simulated images

Center Marker and Aspect Markers

The PVM-741 can display a center marker and aspect markers. The brightness of these markers can be selected from two different levels: gray and dark gray. Users can also select a gray mat to fill the outer area of the aspect markers.

4:3 aspect marker image

* Simulated images

16:9 aspect marker image

* Simulated images

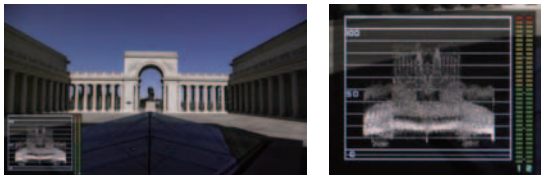
Safety Area Markers

The safety area markers can be selected from 80%, 85%, 88%, 90%, and 93%.

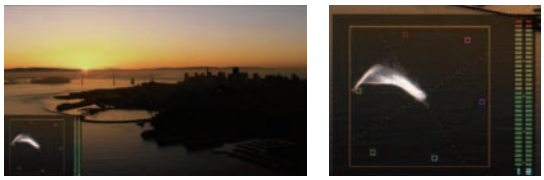
* Simulated images

Waveform Monitor and Vector Scope Display

An input signal's waveform and vector scope with an SDI-embedded 2-channel audio level meter can be displayed on screen. Both the waveform monitor and vector scope have various modes, including a zoom function (in an area of 0 to 20 IRE) with the waveform monitor, and a zoom function (in the central black area) with the vector scope, for adjusting white balance. The waveform of a specified line can also be displayed.



Waveform monitor



Vector scope

* Simulated images

8-ch Audio Level Meter Display

When an SDI interface is connected, the embedded audio level can be displayed on screen with an 8-channel audio level meter. Channels 1 to 8 or 9 to 16 can be displayed.

Audio level meter

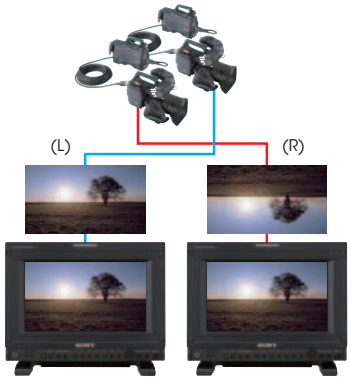
* Simulated images

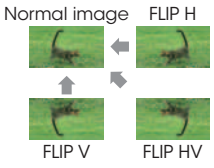
Time Code Display

PVM-741 can display on screen a time code – either LTC or VITC is selectable.

Flip Function

The PVM-741 monitor has a feature to flip a picture without frame delay, horizontally, vertically, or horizontally and vertically. This feature is useful and beneficial – for example, when using a 3D image acquisition system with a 3D rig camera. This allows for much simpler system integration and greater cost efficiency.





* Simulated images

Color Temperature

Color temperatures of D93, D65, or a user preset value can be selected.

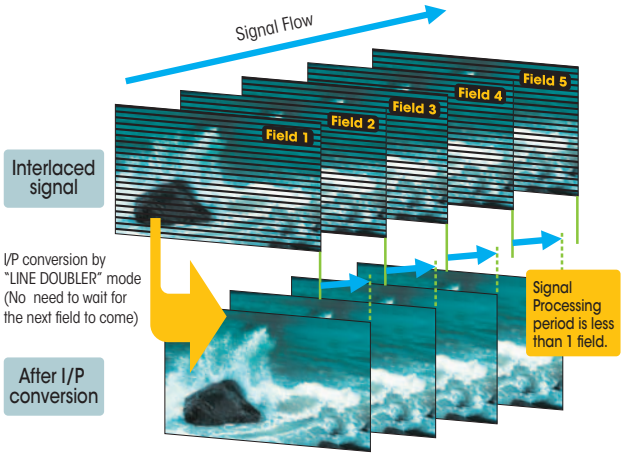
Sophisticated I/P Conversion

PVM-741 uses a motion-adaptive I/P-conversion process to achieve conversion results that are optimized to the picture content – whether the image is static or dynamic. Highly accurate I/P conversion of both HD and SD inputs is provided regardless of signal resolution.

I/P Mode Selection

PVM-741 provides four I/P modes so that users can select the most suitable process to maximize image performance and optimize audio system timing:

- **INTER-FIELD:**
  This mode interpolates images between fields. This is used for picture quality precedence (e.g., to reduce jagged effect on moving pictures).
- **INTRA-FIELD:**
  This mode interpolates images within the field, and delivers naturally reproduced images and quick picture processing. This mode is available only for 1920 x 1080 SDI signal input.
- **FIELD MERGE:**
  This mode combines lines alternately in odd and even fields, regardless of picture movements. This is used for PsF (Progressive Segmented Frames) processing and still image monitoring.
- **LINE DOUBLER:**
  This mode interpolates by repeating each line. This is used for editing and monitoring fastmoving images, and checking line flicker. The minimum processing time is less than one field (0.5 frames).



External Remote Control Function

PVM-741 monitor has an external remote control capability for input/output signal selection and adjustment of various items via Ethernet (10BASE-T/100BASE-TX) connection. Up to 32 monitors and up to four control units can be connected via Ethernet connection and controlled remotely on the network. Also this monitor supports some functions of the BKM-16R – an optional remote control unit for BVM-E/BVM-F/BVM-L/PVM-L Series monitors – such as the power on/off switch and the Input Select function.*

* The PVM-741 does not support all BKM-16R functions.

Power-saving Mode

When no input signal is received for over a minute, the monitor goes into power-saving mode and consumes minimal power. This function prevents unnecessary electrical consumption.

Silent Mode

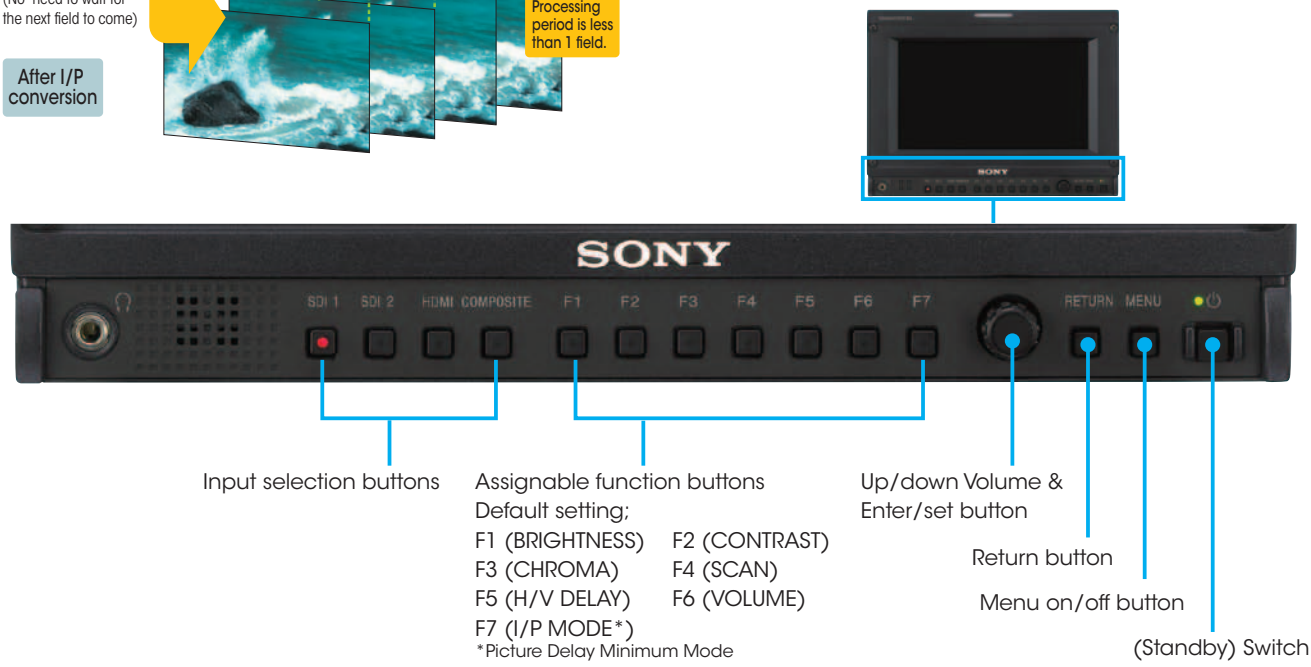
This convenient function enables users to stop the built-in cooling fan achieving monitor operation without any fan rotation noise. Silent mode is ideal when noise must be avoided.

Closed-caption decoder

The closed caption information embedded in EIA/CEA-608 and EIA/CEA-708 can be decoded for display.

Control Panel Design

The PVM-741 incorporates a user-friendly control panel design. By assigning monitor functions to each of its seven function buttons, users can customize the PVM-741 for a specific application or usage such as field or studio use. Seven functions can be allocated to the assignable buttons. Button lights are dimmable and indicator lights are on/off switchable. This function allows users to easily operate a monitoring in a dark environment without interference of these lights.



Input Versatility

Multi-format Signal Interfaces

To provide mobility, the PVM-741 incorporates various video interfaces as standard, including Composite (x1), 3G/HD/SD-SDI (x2), and HDMI® (x1) interface.

3G-SDI Interface Capability

With the 3G-SDI interface, PVM-741 accepts 1080/50p and 1080/60p formats, which is compliant with the SMPTE 425 standard, transmitting up to 4:2:2/10-bit 1080/60p and 1080/50p video data using one SDI cable. Also the PVM-741 accepts 10-bit 4:4:4 Y/Cb/Cr and 4:4:4 RGB of 3G-SDI signals for 1080/ 24PsF, 25PsF, 30PsF, 24p, 25p, 30p, 50i, and 60i.

HDMI® Interface for A Wide Range of Applications

HDMI connectivity can expand user's convenience and applications. For example, the PVM-741 monitor can connect with professional video system such as XDCAM, XDCAM-EX, NXCAM, and HDV. Furthermore, consumer video products like a blu-ray and a digital camera are also connectable. These articles are ideal for blu-ray video authoring and digital photo image previews. Requires HDMI® cable sold separately.

Signal Formats

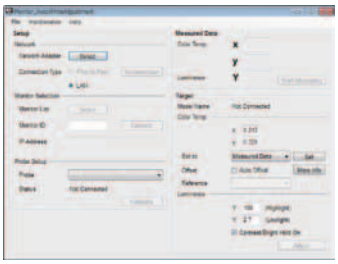
System	Signal standard			
	Analog composite	HD/SD-SDI	3G-SDI	HDMI
575/50i (PAL)	O	O	–	O
480/60i (NTSC)*1	O	O	–	O
576/50p	–	–	–	O
480/60p*1	–	–	–	O
640 x 480/60p*1	–	–	–	O
1080/24PsF*1*2	–	O	O*3	–
1080/25PsF*2	–	O	O*3	–
1080/30PsF*1*2	–	–	O*3	–
1080/24p*1	–	O	O*3	O
1080/25p	–	O	O*3	O
1080/30p*1	–	O	O*3	O
1080/50i	–	O	O*3	O
1080/60i*1	–	O	O*3	O
1080/50p	–	–	O*4	O
1080/60p*1	–	–	O*4	O
720/24p*1	–	–	O*5	–
720/25p	–	–	O*5	–
720/30p*1	–	–	O*5	–
720/50p	–	O	O*3	O
720/60p*1	–	O	O*3	O

*1 Compatible with 1/1.001 frame rates.
*2 1080/24PsF, 25PsF, and 30PsF are displayed as 1080/48i, 50i, and 60i on the screen, respectively.
*3 10-bit 4:4:4 Y/C_B/C_R and 4:4:4 RGB of 3G-SDI signals are supported.
*4 10-bit 4:2:2 Y/C_B/C_R of 3G-SDI signal is supported.
*5 10-bit 4:4:4 Y/C_B/C_R of 3G-SDI signal is supported.

Auto White Adjustment

The PVM-741 monitor employs a software-based color temperature (white balance) calibration function, which is called "Monitor_AutoWhiteAdjustment". Combined with a PC and commercially available calibration tools*, this function enables simple adjustment of the monitor's white balance.

* The Konica Minolta CA-210/CA-310/CS-200, DK-Technologies PM5639/06, X-Rite i1 Pro/i1 Pro2, Photo Research PR-655/670, Klein K-10, and JETI specbos 1211. Software can be downloaded from www.sony.com/monitorsoftware.



"Monitor_AutoWhiteAdjuestment" GUI image

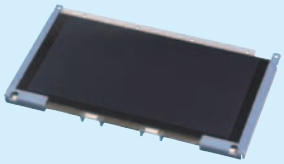
Other features

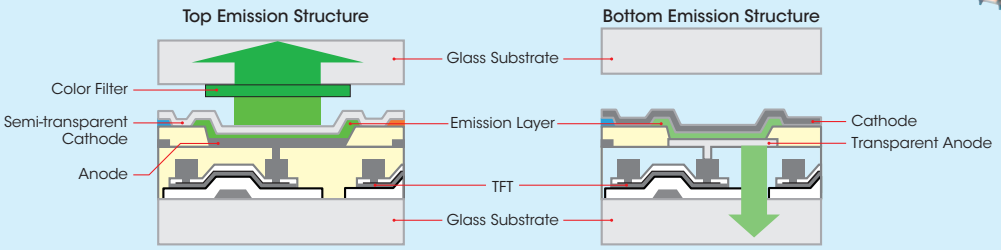
- Three color tally
- Auto chroma/phase function
- Blue only mode
- H/V delay mode
- On-screen menu
- Select language display
- Key inhibit function
- Monaural speaker

About Sony's Super Top Emission OLED Technology

The typical structure of an OLED display panel is a bottom emission structure. This type of structure employs a metal cathode and a chemical desiccant to protect the OLED layer from air and water. It takes light emission from the TFT layer and, due to the structural limitation of the TFT layer's aperture ratio, the amount of light emission is restricted.

Sony's Super Top Emission takes light-emission from the other side of the TFT layer. This top emission structure offers more efficient light emission than a bottom emission structure, and consequently achieves higher brightness.

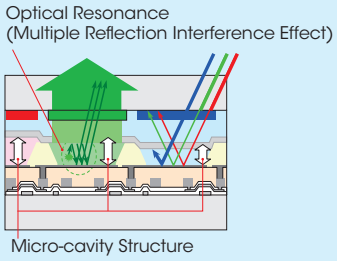


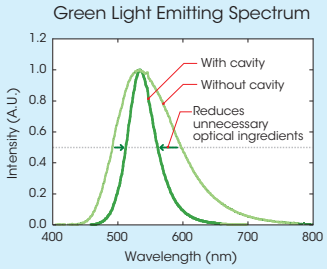


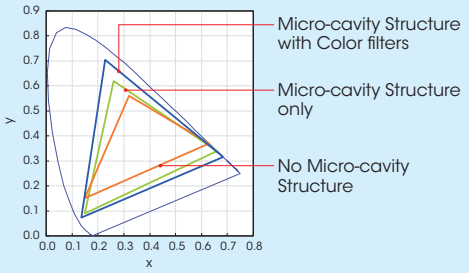
Sony's Micro-cavity Structure Enhances Color Purity

Sony's Super Top Emission technology is a micro-cavity structure and incorporates color filters. Each RGB color has a different wavelength. Sony's micro-cavity structure provides different emission layer thicknesses corresponding to the wavelength of each RGB color.

The micro-cavity structure uses an optical resonance effect to enhance color purity and improve light-emission efficiency. In addition, the color filter of each RGB also enhances the color purity of emitted light, and reduces ambient light reflection.







Blur-free Quick Response to Fast Motion

Another distinguishing characteristic of Sony's Super Top Emission OLED panel is a blur-free quick response to fast motion. Because the OLED electroluminescent layer is a solid type of layer, it inherently responds to any electrical current input and emits light immediately. This characteristic does not change in low-temperature climates.

Solid Sealing Structure

Sony's Super Top Emission OLED panel is completely sealed by glass substrates, and the electroluminescent layer is wholly isolated from outside air and water.

Specifications

	PVM-741
Picture Performance	
Panel	OLED panel
Picture size (diagonal)	7 1/2 inches 188.0 mm
Effective picture size (H x V)	6 1/2 x 3 5/8 inches 163.9 x 92.2 mm
Resolution (H x V)	960 x 540 pixels (QHD)
Aspect	16:9
Panel drive	RGB 10-bit
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)
Input	
Composite	BNC (x1), 1.0 Vp-p ±3 dB sync negative
SDI	BNC (x2)
HDMI	HDMI (x1) (HDCP correspondence)
Audio	Stereo mini jack (x1), -5 dBu 47 kilohms or higher
Parallel remote	Modular connector 8-pin (x1) (pin-assignable)
Serial remote (LAN)	RJ-45 modular connector (Ethernet) (x1) (10BASE-T/100BASE-TX)
DC IN connector	XLR-type 4-pin (male) (x1), 12 V DC (output impedance 0.05 ohms or less)
Output	
Composite	BNC (x1), loop-through, with 75 ohms automatic termination
SDI	BNC (x1), output signal amplitude: 800 mVp-p ±10%, output impedance: 75 ohms unbalanced
Audio monitor out	Stereo mini jack (x1)
Speaker (Built-in)	0.5 W (mono)
Headphones output	Stereo mini jack (x1)
General	
Power requirement	AC 100 V to 240 V, 50/60 Hz, 0.5 A to 0.3 A, DC 12 V, 1.9 A
Power consumption	Approx. 30 W (max.)
Operating temperature	32°F to 104°F (0°C to 40°C) Recommended: 68°F to 86°F (20°C to 30°C)
Operating humidity	30% to 85% (no condensation)
Storage and transport temperature	-4°F to +140°F (-20°C to +60°C)
Storage and transport humidity	0% to 90%
Operating, storage, and transport pressure	700 hPa to 1060 hPa
Dimensions (W x H x D) (with stand)	8 7/8 x 7 1/4 x 6 3/8 inches 222.4 x 183.5 x 161.8 mm (when AC adaptor is attached)
Dimensions (W x H x D) (without stand)	8 7/8 x 6 5/8 x 2 7/8 inches 222.4 x 166 x 70 mm (when AC adaptor is detached)
Weight	4 lb 6 oz 2.0 kg
	5 lb 12 oz 2.6 kg (When AC adaptor is installed)
Supplied accessories	AC power cord (1), AC plug holder (1), AC adaptor (1), Handle (1), Arm mount bracket (1), Screws (4), Operating Instructions (1), CD-ROM (1), Using the CD-ROM manual (1)

Optional Accessories

MB-531
Mounting Bracket

MB-532
Mounting Panel

VF-510
ENG Kit (Viewing Hood, Carrying Handle and Connector Protector)

QR-A200
Anton Bauer Gold Mount Battery Plate Mounts onto Sony editing decks DNW-A25/A220/A225/DS70 and Sony field monitors. The adapter can also be used to power Sony DSR50 VTR and BVM-D9 HD monitor

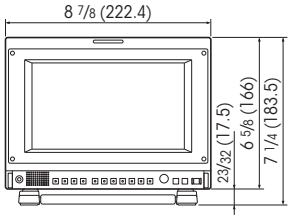
LCPVM02KH
Portabrace Monitor Soft Case (for LMD-940W/ PVM-740)

Probekit2
X-Rite i1PRO Light Probe (for monitors: BVM-E170, BVM-E250, BVM-F250, BVM-F170, PVM-L3200, PVM-740, LMD-1541W, LMD-2341W, LMD-940W, LMD-1751, LMD-2451, LMD-2451TD, LMD-4251TD)

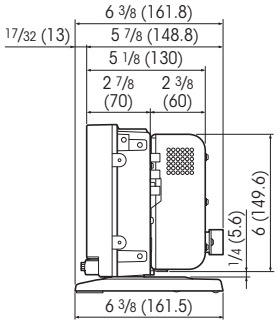
Dimensions

Units: inches (mm)

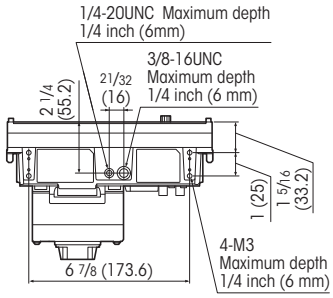
Front



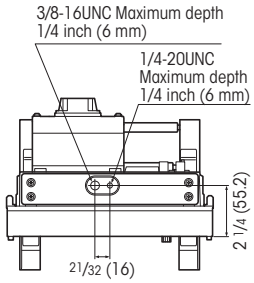
Side



Bottom
(Without the stand)



Top
(With the arm mount bracket)



The PVM-741 is produced under control of the Sony EMCS Corporation, which has received ISO14001 Environmental Management System certification.

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DI-0284 (MK10681V2)

Printed in USA (10/12)